CALOR SRL
Str. Progresului nr. 30-40, sector 5, Bucuresti
tel: 021.411.44.44, fax: 021.411.36.14
www.calorserv.ro - **www.calor.ro**

VIADRUS

BOILER OPERATION AND INSTALLATION

MANUAL

VIADRUS G 300

Date of revision 8/2007

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Dear customer

we thank you that you decided to purchase VIADRUS G 300 boiler thus showing your confidence in company of ŽDB GROUP a.s., VIADRUS Heating technique plant.

For you to get used to operating your new product correctly from the start please read carefully this manual instructing you how to use the product (first of all chapter No.7 - Boiler operation by user). Please follow the information stated in further text and also the Regulation No.91/93 Coll.. issued by Czech Labour Safety Office for ensuring the labour safety in law-pressure boiler rooms; this will guarantee a long-time and failure-free boiler operation to both your and our satisfaction.

Order: Order specification code (type designation)

G 300 X X X X

Number of sections :
5: 5 sections
6: 6 sections
7: 7 sections
8: 8 sections
9: 9 sections
10: 10 sections
11: 11 sections
12: 12 sections
13: 13 sections
14: 14 sections

The way of delivery:
S : compound/ assembled state
R : decomposed/disassembled state

Type of regulation:
4: Electropanel – basic design
6: Electropanel - fixed OS 06

Type of burner:
0: no burner
1: with burner

In the order it is necessary to specify the data according to the order specification code

1. Boiler use and advantages

Cast-iron sectional warm-water boiler VIADRUS G 300 is designed for heating the heat carrying substance (water) by the thermal energy which it gets from gas or liquid fuels burning process while using the appropriate pressure burners. These burners must correspond to :

ČSN 07 5800:1990 Burners for gas and liquid fuels
ČSN 07 5806:1986 Burners for gas fuels
ČSN 07 5853:1990 Burners for liquid fuels.

The boiler is made **exclusively for law-pressure warm-water systems** of central heating with maximum working temperature of the heat-carrying substance (water) up to 115 °C, at the maximum working overpressure of 4 bar and for burning the fuels as follows:

- gas fuels - natural gas
- liquid fuels - furnace oil extra light (TOEL)

The boiler body is tested by applying the test overpressure of 8 bar.

The boiler advantages are as follows:

1. Long service life of the cast-iron boiler body
2. A highly economical operation . The efficiency of combustion higher than 90,5 % for all kinds of fuels and in the whole performance range.
3. At request delivery including the burner.
4. A modern design.
5. A fully automated two-stage operation at the recommended types of burners.
6. Operation signalling, possibly the signals used for transfer into a superior control system and the boiler failures. Possibility to operate the boiler through a superior automatics or space temperature sensor.
7. At request there can be ordered the regulation elements designed for heat carrying substance(water) temperature up to 115°C (as standard they are delivered up to the temperature of 95 °C).
8. Possibility of boilers concatenation.
9. Delivery in either an assembled or disassembled condition at customer ´s request
10. Depending on boiler room layout there can be designed opening of sealing and burner plate either to the left or right hand side.
11. Easily accessible sight glass and the probe for overpressure measuring in the combustion chamber .
12. In combination with recommended burners (see chapter„Boiler technical parameters“) spares of environment because the combustion results meet in the whole performance line the rigid environmental standards and regulations.

2. Boiler VIADRUS G 300 technical data

Table No.1 Boiler thermo-technical parameters

fuel efficiency : natural gas 33,99 MJ/kg furnace oil extra light (TOEL) 42,65 MJ/kg

Boiler size - number of sections	**ks**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Rated thermal output	kW	103	126	149	172	195	218	241	264	287	310
Rated thermal input	kW	113,2	138,5	163,7	189	214,3	239,6	264,8	290,1	315,4	340,7
Efficiency	%	90,5									
Fuels consumption											
natural gas	m^3/h	11,5	14,1	16,7	19,3	21,9	24,5	27,1	29,7	32,2	34,9
furnace oil extra light (TOEL)	kg/h	dle výrobce burneru									
Boiler water volume	l	56,4	65,4	74,4	83,4	92,4	101,4	110,4	119,4	128,4	137,4
Max. working water overpressure	bar	4									
Max. operating temperature of heating water	°C	95 (115)									
Combustion gas technical data											
Necessary draught	mbar	0,05									
Max. overpressure in combustion chamber	mbar	2									
Combustion gas temperature	°C	185									
Combustion gas mass											
- gas fuel ; 9,5% CO2	kg/h	191	233	276	318	361	403	446	488	531	574
- liquid fuel ; 13%CO2	kg/h	172	210	248	287	325	363	402	440	478	517
Dimensions											
combustion space volume	dm^3	81,79	100,73	119,68	138,62	157,56	176,51	195,45	214,39	233,33	252,27
Heat-delivery surface	m^2	5,48	6,75	8,02	9,29	10,56	11,83	13,10	14,37	15,64	16,91
combustion space depth	mm	475	585	698	805	915	1025	1135	1245	1355	1465
min. length of burner orifice	mm	125								160	
max. burner orifice at the combustion space	mm	50									
orifice for burner ϕ *)	mm	150								165	
boiler width	mm	752									
boiler height	mm	1386									
boiler depth A	mm	899		119		1339		1559		1779	
outlet orifice ϕ	mm	225									
heat carrying substance connection ϕ	mm	80									
Boiler mass	kg	505	585	665	745	825	905	985	1065	1145	1225

*) requirement for other orificeϕ – please state in order (at request)

Tab. No.2 Recommended types of burners

Boiler size - number of sections	pc	5	6	7	8	9	10	11	12	13	14
Rated thermal output	kW	103	126	149	172	195	218	241	264	287	310
Recommended burners for gas fuels combustion											
WEISHAUPT		WG 20 N/1 - A			WG 30 N/1 - C						WG 40 N/1-A
INTERCAL		SGN 44/2			SGN 55/2		SGN 66/2				SGN 77/2-350
BENTONE		BG 300-2, M				BG 400-2, M				BG 450-2, M	
PBS Třebíč		APH-M 02 PZN,PPN						APH-M 04 PZN,PZ,PPN			
RIELLO		GULLIVER BS 3D			GULLIVER BS 4D			RS 28 TC			RS 38 TC
Recommended burners for liquid fuels combustion											
WEISHAUPT		WL 20-A			WL 30 - C						WL 40 Z-A
INTERCAL		SL 44/2			SL 55/2		SL 66/2				SL 77/2
BENTONE		B 20K-2		B 30 - 2			B 40 - 2				
PBS Třebíč		AOH – M 02 PN						AOH – M 04 PN			
RIELLO		GULLIVER RG 3D			GULLIVER RG 4D			RL 28 TC			RL 38 TC
UNIGAS		LO 140			LO 200			LO 400			LO 400

When using other than recommended burners the manufacturer doesn't guarantee the stated parameters achievement.

3. Description

3.1. Boiler construction

The boiler body (Fig. No.1) consists of sections assembled by means of forced-on insertions and is secured by anchor bolts. Boiler has a three-draught construction and the sections create the combustion space and the convection part, inside then the boiler water space. The tightness of boiler gas combustion space is guaranteed by boiler cement applied to sections seating faces and to circumference of individual section joints.

On the front section there are fixed sealing and burner plates that either can be opened to right or left hand side according to boiler room layout. This must correspond with screw suspensions positioning (lugs).

The openings G 2"in the front section are closed with plugs G 2". The upper plug has a boring G 1/2“ for the basin of regulation and safety thermostat. In the left upper riser of the section there are two openings G 1/2" for thermometer and pressure gauge sensors.

The input and output of a heat carrying substance is situated at the rear part of boiler and it is carried out with flanges and a mouthpiece DN 80. At the lower flange with a mouthpiece there is positioned the filling & discharging cock. In the opening for heat carrying substance input (under the flange) there is positioned a restrictive insertion (5 – 10 sections and 11 – 14 sections), which streamlines the water flow in boiler.

The combustion gases from the boiler are led/ taken away through a flue orifice with an explosion shutter which at the same time serves as a small cleaning cover. At the flue orifice there are measuring points for temperature and combustion gases analysis.

The boiler body is fully insulated by plates made of mineral insulation . The steel shell of boiler is surface treated by comaxite paint. In the upper front part of boiler there is positioned the electro-panel with regulation, safety and control elements.

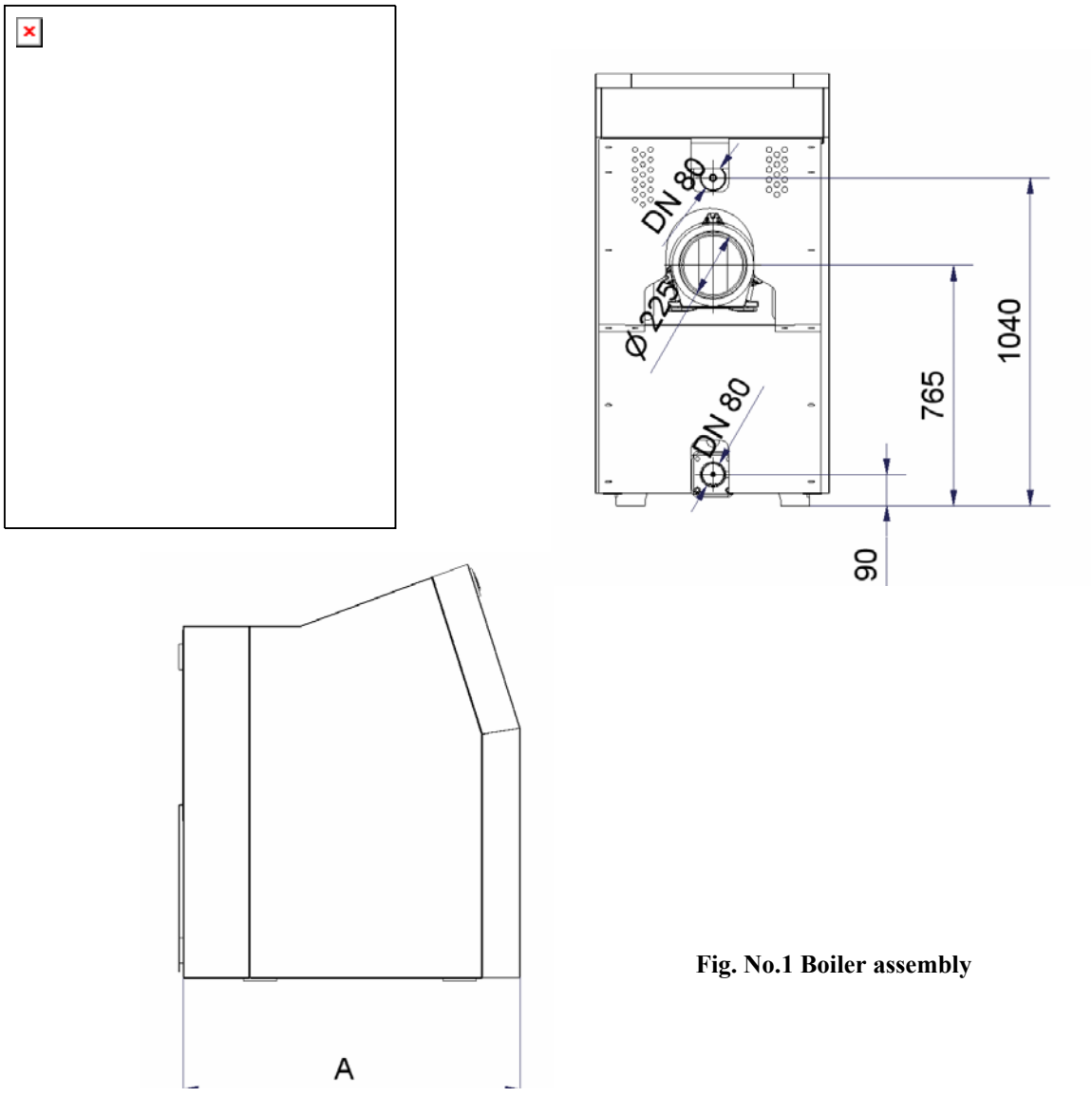


Fig. No.1 Boiler assembly

3.2. Electrical diagrams

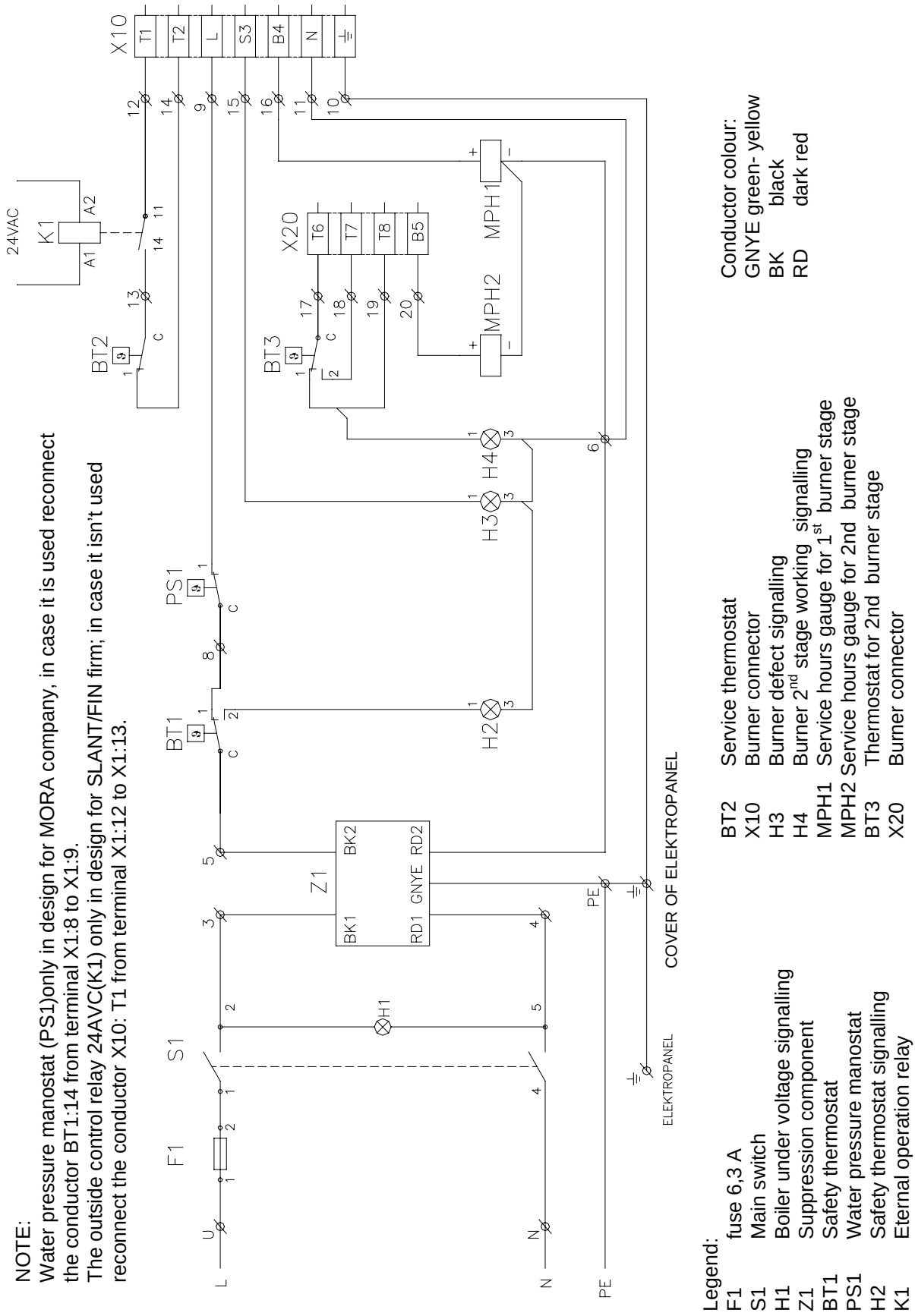


Fig. No.2 Elementary wiring diagram for electro-panel connection

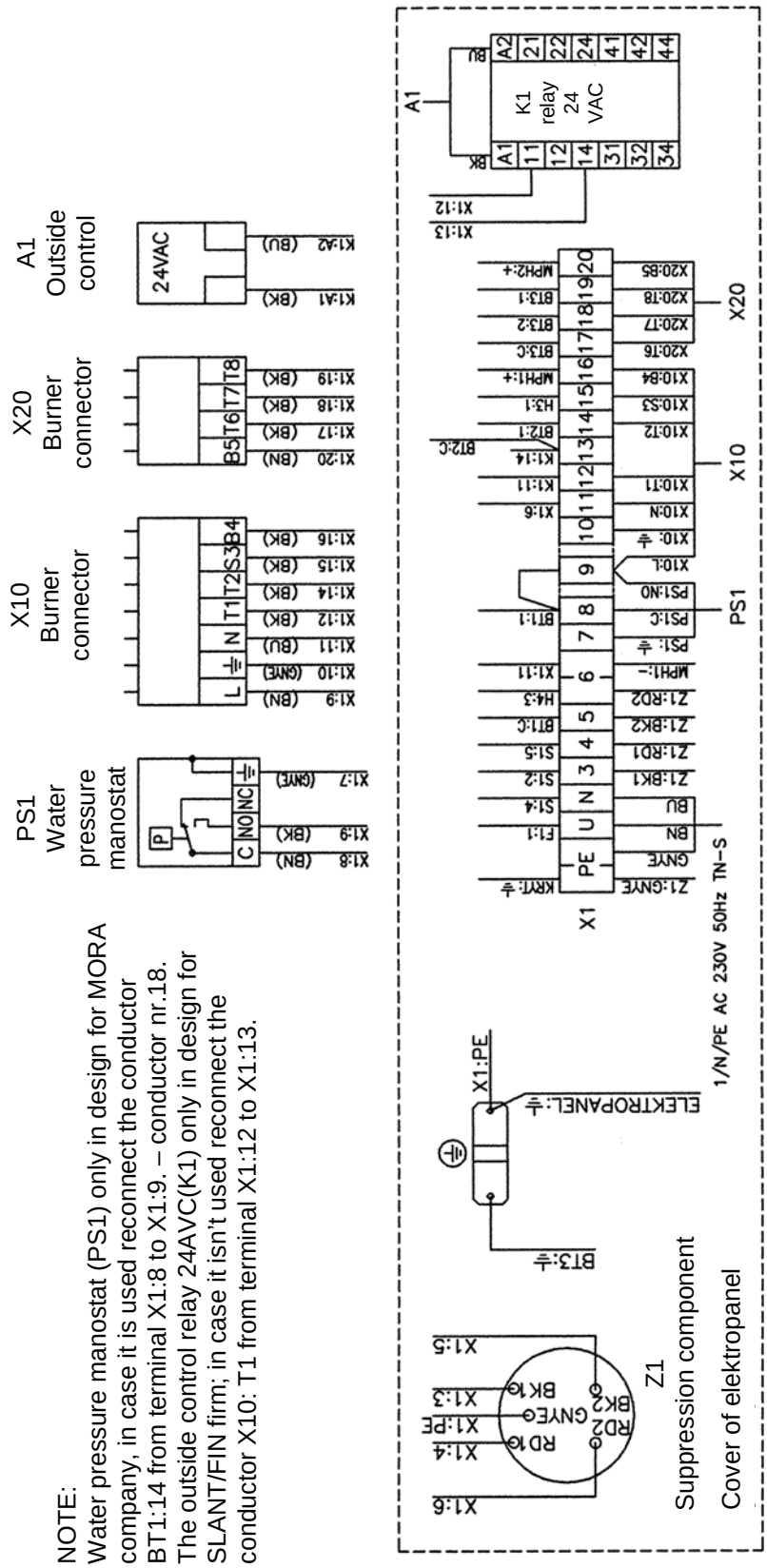


Fig. No.3/1 Electro-panel wiring diagram

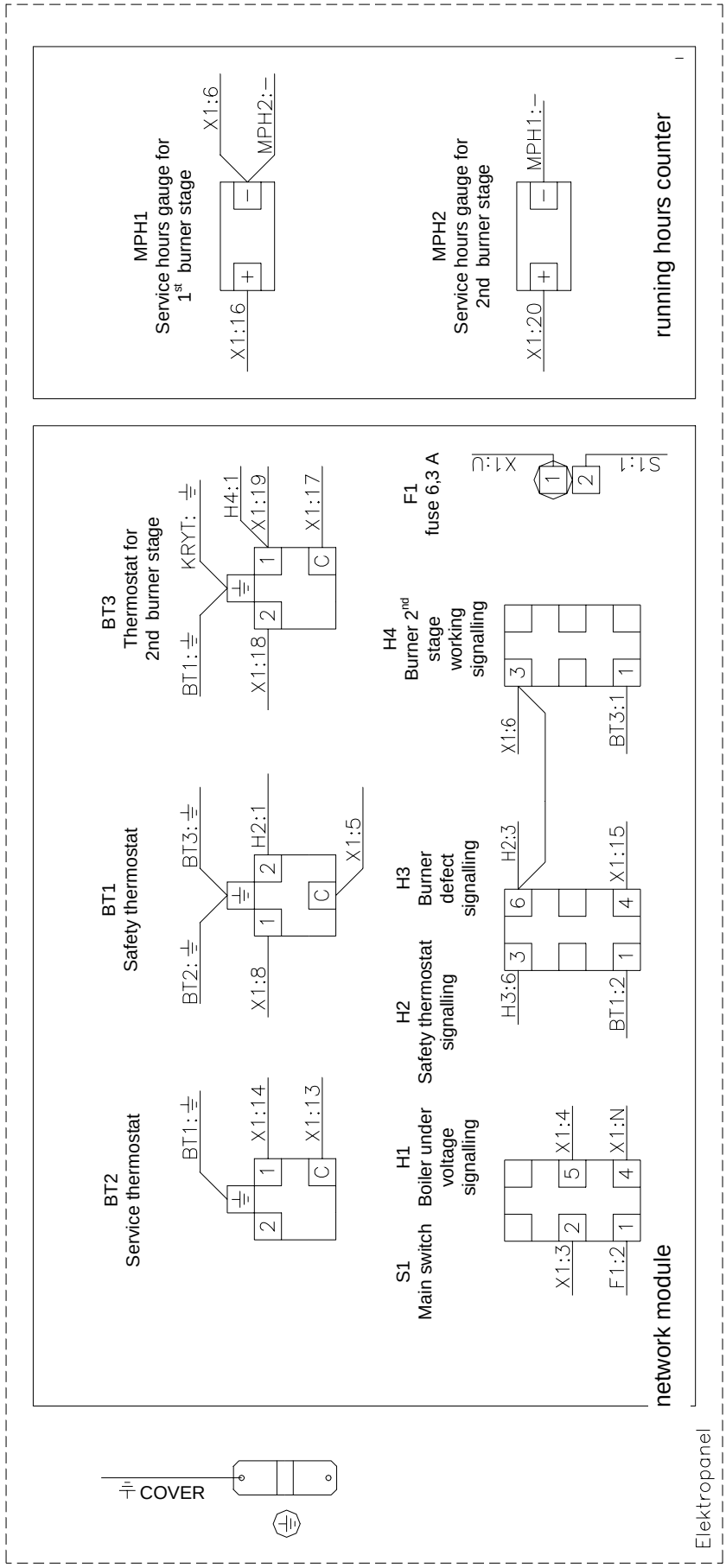


Fig. No.3/1 Electro-panel wiring diagram

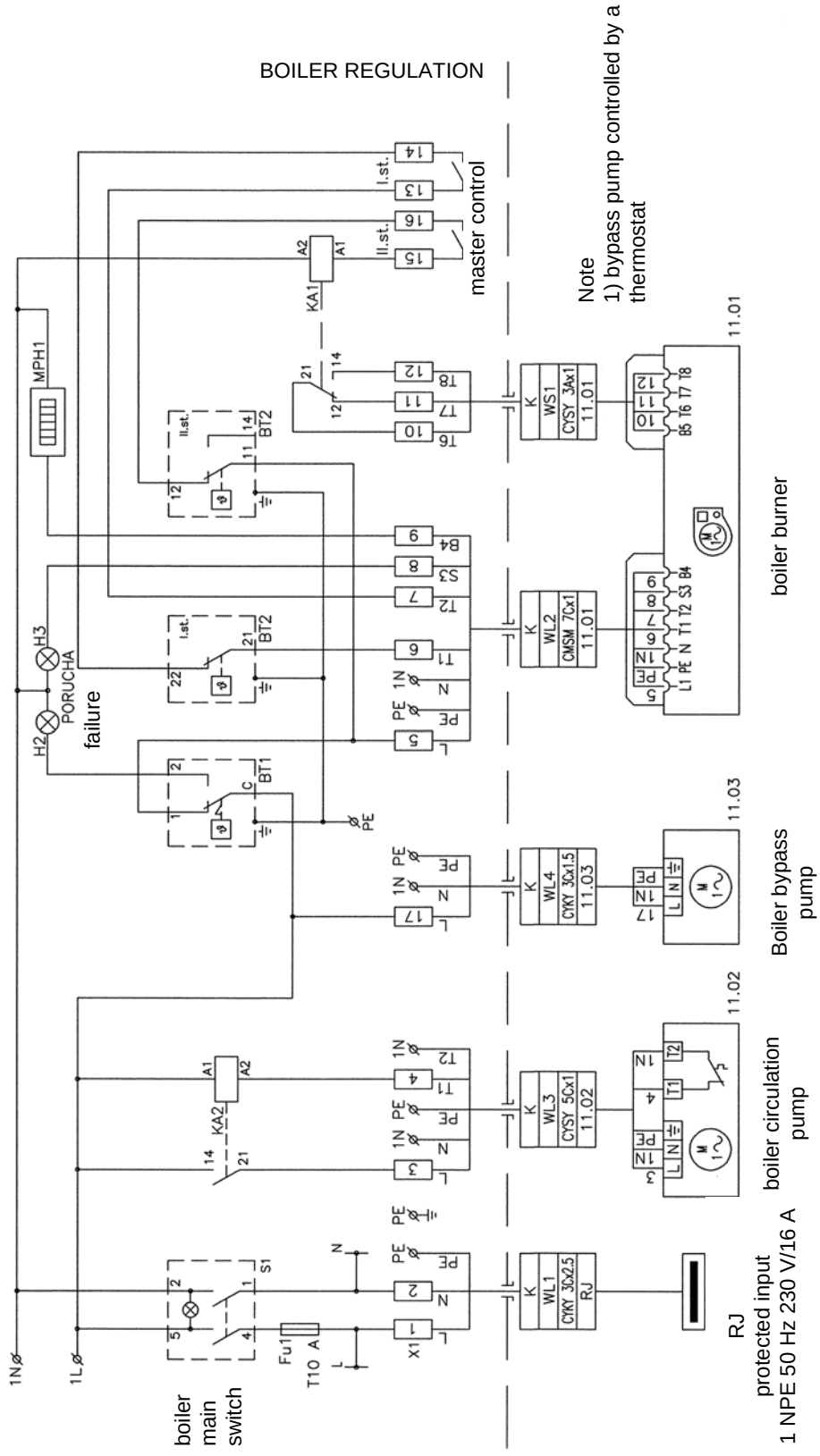


Fig. No.4 RZ 20 Regulation wiring diagram (OS 06)

4. Positioning and installation

4.1. Boiler standing in boiler room

The boiler is designed for positioning in closed areas with aggressiveness degree between a little up to moderately aggressive and in terms of electrotechnic regulations in a common environment (ČSN 33 2000 – 7 – 701:1997). It agrees with the use in rooms separated from housing room itself (Declaration 91/93 Coll.., ČSN 07 0703:1986 Gas boilers).

Boiler noise level does not exceed the maximum level of L_A = 75 dB(A) - (the real value depends on the type of used burner : for recommended types it ranges between 60 – 70 dB).

The boiler must be positioned on a fireproof pad or a sustaining wall approx. 50 mm high. In front of boiler there must be left a free handling area minimum for the boiler depth + 500 mm, from one side 600 mm (access to the back).

When positioning the boiler there must be respected the layout requirements of selected type of burner (gas inlet and others.)

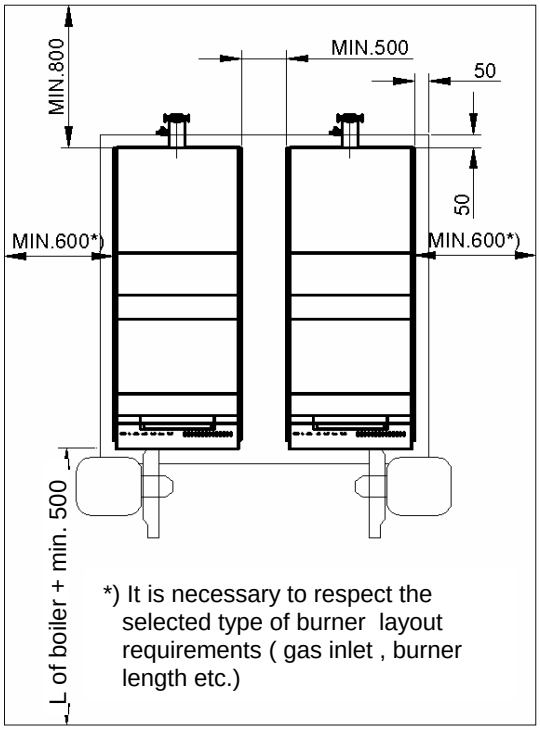


Fig. No.5 Boilers positioning in boiler room

For safety reasons at the installation there must be observed the distance of 200 mm from flammable substances (ČSN 06 1008:1997 – Fire safety of local appliances and heat sources). For easily flammable substances it means those that are quickly self-burning also after removing the source of inflammation (like tar paper, cardboard, asphalt and tar paper, wood and hardboards , plastic substances, flooring) the distance gets doubled. A safe distance must be doubled also in case that the building material flammability degree hasn't been proved.

In case that there is a danger of a temporary intrusion of combustible vapours or gases into the boiler room or at the works at which there temporarily occurs the fire & explosion danger (gluing the flooring, coats with combustible paints) the boiler must be put out of operation in time and before the works commencement.

Warning:
No subjects made of flammable substances (see Fig. No.5) are allowed to be put on the boiler and within a distance smaller than the safety distance.

Filling the heating system with water. The heating system must be thoroughly flushed out so that all impurities that could be deposited in distribution system and radiators are washed out because otherwise they could damage the pump. Water for filling the boiler and heating system must be clear and colourless , with no suspended substances, oil or chemically aggressive substances. The circulation and filling water parameters must correspond to:

Tab. No.3 The highest permissible values of heating water according to ČSN 07 7401:1992

hardness	(mmol/l)	1
Ca2+	(mmol/l)	0,3
Total Fe + Mn concentration	(mg/l)	3*

*recommended value

In case that the water hardness is unsuitable it must be adjusted. Not even heating the water with higher hardness several times will prevent the soils precipitation on the boiler body walls. Precipitation of 1 mm calcite at a given point will reduce the passage of heat from metal to water by 10%.

During the heating season it is necessary to keep a constant heating water volume in the heating system and be particular about venting the heating system. Water from boiler and heating system must never be discharged or taken for use except for inevitable cases like repairs etc. By discharging the heating water and filling the system with new water the danger of corrosion and scaling is increased. In case that it is necessary to **replenish water in heating system, we only refill it in a cold boiler**, otherwise the sections could crack.

Tab. No. 4 Flammability degrees of building materials and products

Flammability degree of building materials and products	The building materials and products ranged in flammability degree (selection of ČSN 73 0823: 1984)
A – fireproof	Granite, sandstone, concretes, bricks, ceramic tiles, mortars, fire protection plasters ,….
B –flammable with difficulties	akumin, izumin, heraklit, lignos, plates and a basaltic felts, plates of glass fibres ,.....
C_1 – hardly flammable	Beech wood, oak wood, hobres board, plywood, , werzalit, umakart, sirkolit,....
C_2 – mediumly flammable	Pinewood, larch wood, spruce wood, chipboard and a cork slabs, rubber floorings, ...
C_3 – easily flammable	Bitumen felt, fibreboards, cellulose materials, polyurethane, polystyrene, polyethylene, PVC, .

4.2. Directives and regulations

The boiler is allowed to be installed by a company with a valid authorization to do installations and maintenance at the gas appliances. A project must be elaborated for the installation according to valid regulations.

a) to the heating system

ČSN 06 0310 : 2006 Central heating, design and assembly
ČSN 06 0830 : 2006 Interlocking plant for central heating and TUV heating
ČSN 07 7401 :1992 Water and steam for thermal energy equipment with steam working pressure up to 8 MPa

b) to gas distribution

ČSN EN 1775 : 1999 Gas supply–pipelines inside the buildings- the maximum operating overpressure lower than 5 bar.
ČSN 38 6413 : 1990 Gas mains and law and medium pressure connections
ČSN 07 0703 : 1986 Gas boiler rooms
ČSN 38 6405 : 1988 Gas equipment. Operation principles.
ČSN 38 6420 : 1983 Industrial gas conduits.
Act No.222/94 Coll.. of conditions for business and state administration execution in energy branches and of the state energetic inspection
Declaration No. 91/93 Coll.. of Czech Labour Safety Office for ensuring the labour safety in law-pressure boiler rooms.

c) to a liquid fuel distribution

ČSN 65 0201:1992 Flammable liquids. Workshops and storerooms.
Decl. MV ČR No.35/77 on fire safety when storing and using the furnace oil
PO 1410/65 z 1. 3. 1966 a temporary directive for heating by furnace oil and fuel oil in view of fire protection

d) to electricity network

ČSN 33 2180 : 1980 Connection of electrical instruments and appliances .
ČSN 33 2000-3: 1995 Elecrotechnic regulations. Electrical installation. Section 3 : Basic characteristics determination .
ČSN 33 2000-7-701:1997 Electrotechnic regulations - electrical installation- Section 7 : single-purpose equipment and in special buildings
ČSN 33 2130 : 1985 Electrotechnic regulations. Internal electricity distribution.
ČSN IEC 446 : 1989 Electrotechnic regulations. Marking the conductors with colours or numerals. Implementing regulations.
ČSN 33 0165 : 1992 Electrotechnic regulations. Marking the conductors with colours or numerals. Implementing regulations.
ČSN 33 2350 : 1983 Regulations pro electrical equipments in aggravated climatic conditions.
ČSN 34 0350 : 1965 Electrotechnic regulations. Regulations for floating supplies and cord conduits .
ČSN 33 1500 : 1991 Electrical equipments revision
ČSN EN 60 335 – 1 : 1997 Safety of electrical household appliances and similar purposes Section 1 – General requirements .

If the selected burner is without a main switch it is necessary according to ČSN 07 5801:1990 - Burners for gas fuels – to install the main switch within the burner reach . The protection must be carried our according to the burner manufacturer ´s instructions. .

e) to the chimney

ČSN 73 4210 : 1989 Chimneys and smoke-flues execution and fuel consumers connection
ČSN 73 4201 : 1989 Chimneys and smoke-flues design

The connection must carried out only if approved by a chimney organization wand must meet all provisions of these standards. The chimney must be resistant to combustion gases condensate, otherwise it might be seriously damaged.

f) with regard to fire regulations

ČSN 06 1008 : 1997 Fire safety of heat installations .
ČSN 73 0823 : 1984 Fire technical substances characteristics. Flammability degrees of building materials.

5. Order, delivery and assembly

5.1. Order

In an order it is necessary to specify following items :

1. Boiler size
2. Demands on elements delivered at request .

5.2. Delivery and accessories

Standard :

- In decomposed condition (individual sections on the pallet ,the boiler fitting and accessories in a transport package)
- Casing/ jacket including insulation in a cardboard cover
- Blank flange for burner (necessary openings for used type of burner are only made during the assembly)
- Electro-panel - basic design
- Business technical documentation

At request :

- in assembled condition - the boiler body with mounted fitting on the pallet, protected by a foil, accessories stored in boiler. Jacket, including insulation in a cardboard cover.
- delivery with a recommended burner (see tab. No.2)
- flange for burner ϕ 150 mm (ϕ 140 mm, ϕ 165 mm) with connection openings according to the ordered burner
- possibility to deliver the burners
- regulation elements design for output temperature up to 115 °C.

5.3. Assembly process

The assembly process is stated in „ VIADRUS G 300 boiler assembly manual “

6. Commissioning

Putting the boiler into operation, setting the heat output and any intervention into the electrical part of boiler or connection of further control elements can only be done by service organization authorized to do the service works and an authorized firm for servicing the burner being operated.

1. Burner installation and assembly, its adjustment and putting the boiler with a burner into operation must be confided to the care of a burner supplier ´s service firm . The service firm will give the user a training in operation and provide him with burner use manual and guarantee plus after-guarantee repairs.
2. Before putting the boiler into operation a record must be made in Inspection book.

6.1. Checking activities before initiation

Before putting the boiler into operation it is necessary to check:

a) filling the heating system with water (thermo-manometer check) and tightness of the system
b) setting the boiler thermostat stage II. (rated power/ nominal output) to 60 - 90 ^{o}C (within the range 60 - 115 °C in case that the boiler is operated above 95°C).
c) opening all slide-valves and valves between the boiler and heating system
d) opening the fuel inlet
e) inlet pressure of fuel before entering the boiler according to the burner documentation

f) connection to the electricity network 230V/380V 50 Hz/TN-S
g) connection to the chimney (the necessary chimney draught is 0,5 mbar).
h) max. overpressure in combustion chamber is 2 mbar. The probe positioned on burner plate serves for overpressure measuring in combustion chamber.

Setting the regulation elements:
- regulation thermostat stage I. (reduced output) – permanently set by manufacturer to 95°C
- safety thermostat - permanently set by manufacturer to 105°C (to 120°C in case that the boiler is operated above 95 °C)

6.2. Boiler conversion from „ liquid fuels“ to „ gas fuels“ and back

The boiler conversion from „ liquid fuels“ to „ gas fuels“ and back doesn't require any adaptations apart from the burner and adequate flange exchange for a burner. Before the conversion we recommend to check the body, the combustion gases routes and their thorough cleaning.

This conversion (burner exchange) will only be required by a customer at a contractual service firm – organization entitled to be engaged in this activity.

7. Boiler operation by user

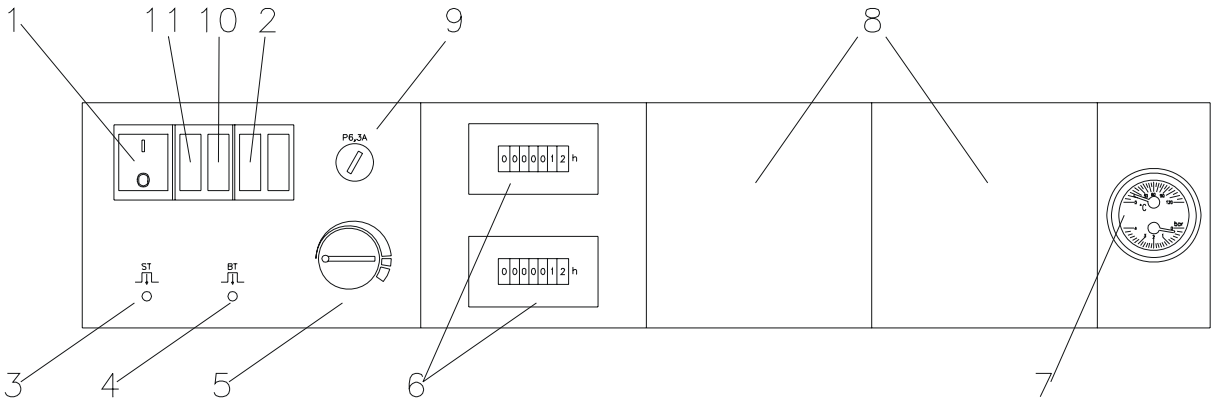
The boiler works automatically according to the regulation elements setting and users only do the following operating activities that they are obliged to familiarize with before putting the boiler into operation as follows:

1. **Switching on and switching off the boiler** by means of network switch on the boiler electro-panel.
2. **Setting and checking** the required **heating water temperature** within 60 – 95°C limits (to be set on115 °C in case that the boiler is operated above 95°C).
3. **Unblocking the safety thermostat.** In case that the boiler is switched off by a safety thermostat, the signal lamp on electro-panel is alight thus signalling that the temperature has been exceeded. The user can unblock the thermostat by means of the pushbutton "unblocking" at the safety thermostat positioned at the rear panel of control box.
4. **ressure check in heating system**

7.2. Electropanel – basic design

Electro-panel consists of basic parts as follows:

- electro-panel itself with network module
- capillary pressure gauge
- capillary thermometer
- service thermostat stage I
- service thermostat stage II
- safety thermostat
- running hours counters stage I. and II.
- burner operation control lamps stage I. and II.
- "failure" control lamps – safety thermostat switching
- connecting terminal block



1 Main switch
2 Signalling of operation stage II.
3 Service thermostat stage I.
4 Safety thermostat
5 Service thermostat stage II.
6 Running hours counter stage I. and II.
7 Thermomanometer
8 Blind flanges
9 Fuse 10 A
10 Burner failure signalling
11 Heating water temperature exceeded – signalling

„ The Operation and installation manual is a part of delivery in case that a equithermal regulation is required “.

IMPORTANT WARNINGS :

1. **The boiler after initiation works automatically. It only can be operated by adult persons familiar with this manual and the burner operation manual.**
2. **The boiler must be operated according to the manual and related standards.**
3. The air of combustion **must not contain a high moisture and dustiness.** If their occurrence cannot be excluded in the environment related to the boiler location there must be brought the air of combustion into the boiler room directly from outdoor environment .
4. **The boiler room must be kept in a clean and dust-free condition.** From the boiler room area there must be excluded all sources of pollution and during the works (insulation works, boiler room cleaning) that cause the dustiness the boiler must be put out of operation. Even a partial burner clogging with dirt devalues the combustion process and endangers an economical and reliable boiler operation.
5. **To prevent the boiler from retting followed by low-temperature corrosion** at the places where a more permanent run at lower temperatures can be expected (transition periods, at the heating system with a large heating water volume, law-temperature regime etc.) it is necessary to ensure that the return water temperature does not drop below 50 °C. The best way is the creation of boiler own circuit .
6. Adjustment of burner stage I. (reduced output) must be done with regard to the combustion gases temperature in a way making sure that it doesn’t drop below 130°C.
7. **Water from boiler and heating system should never be taken for use neither discharged** apart from the indispensable cases like system repairs. The water discharge increases the corrosion and scale formation danger. If it is necessary to refill water always chemically treated in heating system then **we only refill the cold boiler** in order to avoid the boiler sections breaking.
8. **If there occurs the boiler failure condition,** the lamp signalling the burner failure lights up at the boiler electro-panel. In case of electricity outage the burner is switched off and after voltage recovery in el. network there will automatically run a new burner start.
9. **The burner operation failures** are in detail described in burners operation manual , including the ways of their elimination and they must be followed.
10. **In case of a long-term shut-down of a boiler this boiler must be disconnected from el. network.**
11. **In case that there occurs the danger of flammable vapours or gases development and their intrusion into the boiler room** , or at the works where there temporarily occurs the fire or explosion danger (gluing the flooring, painting with flammable paints), **the boiler in time and before works initiation must be put out of operation.**
12. **No objects made of combustibles are allowed to be put on boiler and within a distance lower than a safety distance from the boiler.**
13. **The user is obliged to confide the commissioning, regular maintenance and failures elimination only to the care of a professional contractual service accredited by ŽDB GROUP a.s. Bohumín, the boilers manufacturer, Heating technique plant VIADRUS, otherwise the boiler proper function guarantee doesn’t apply. “VIADRUS G 300 boiler quality and completeness certificate “after having been filled in by contractual service organization serves as the “ Guarantee certificate“.**
14. **On the boiler there must be carried out once a year a regular maintenance according to the next chapter.**

If you fail to meet these conditions you cannot requisite the guarantee repairs.

The list of contractual service organizations is appended separately.

8. Maintenance

All interventions are only allowed to be done by contractual service organization trained by the manufacturer.

1. Disconnect the boiler from the el. network.
2. Close the fuel inlet to the burner.
3. Open the burner plate with a burner and the sealing plate.
4. Check the degree of boiler convection surface clogging and by using a brush eliminate the impurities from heat- exchange surfaces of convection part of boiler and the combustion space. The remnants after cleaning must be removed both from the combustion space and from the outlet orifice after the small cleaning cover - the explosion shutter disassembly . **The explosion shutter and the springs must not be manipulated.**
5. Check the burner orifice clogging. If the burner orifice is dirty it must be cleaned according to the burner manufacturer ´s instructions.

6. A careful closing of the burner plate with the burner , the sealing plate and **all small covers – check their tightness**.
7. Mount the holder with explosion shutter.
8. Open the fuel supply; connection to el.network and boiler start-up.
9. Check the tightness of fuel supply to the burner .
10. Setting and adjusting of boiler heat output.

9. Instructions for product disposal after its service life

With regard to the fact that the product is constructed of common metal materials the individual parts are recommended to be disposed of as follows:

- exchanger (grey cast-iron), through a firm dealing with waste salvage and disposal
- piping, jacketing, through a firm dealing with waste salvage and disposal
- other metal parts, through a firm dealing with waste salvage and disposal
- insulation material ROTAFLEX into the common waste

We recommend to dispose of boiler cover in the way as follows :

- plastic foil , cardboard cover and wooden pallet into the common waste
- metal tightening tape , through a firm dealing with waste salvage and disposal

In case that the product has lost its manufacture qualities there can be taken advantage of a repeated product take-off (if it is introduced) in case of originator ´s statement saying that this is the waste and it will be handled according to the legislation valid in the particular country.

10. Failures and their elimination

- the failures elimination can only be done by a trained contractual service organization and this organization will make an entry in the guarantee certificate supplement
- **in case that there is repeatedly blocked the safety thermostat it is also necessary to call a contractual service worker**
- **the burners operation failures are in detail described in Burners operation manual , including the ways of failures elimination and they must be followed.**

11. Guarantee and liability for defects

ŽDB GROUP a.s., VIADRUS heating technique plant gives a guarantee:

– at boilers for 24 months from the date when the product was sold to an end user
– at boiler body 5 years from the date the product was dispatched from manufacturing plant

For the guarantee validity the manufacturer requires:

– in terms of **Act No.222/94 Coll. „ On entrepreneurship and state administration execution conditions in certified branches and on State energy inspection" Regulation No.91/93 Coll. issued by „Czech Labour Safety Office for ensuring the labour safety in law-pressure boiler rooms " and ČSN 38 6405, ČSN EN 1775** to inspect regularly the boiler. The inspections can only be done by an authorized organization (contractual service), **accredited by** ŽDB GROUP a.s. Bohumín, VIADRUS Heating technique plant and the manufacturer of the burner being operated.
– To document all records of carried out guarantee and after-guarantee repairs and regular annual boiler inspections in the guarantee certificate supplement which belongs to the boiler revision book.

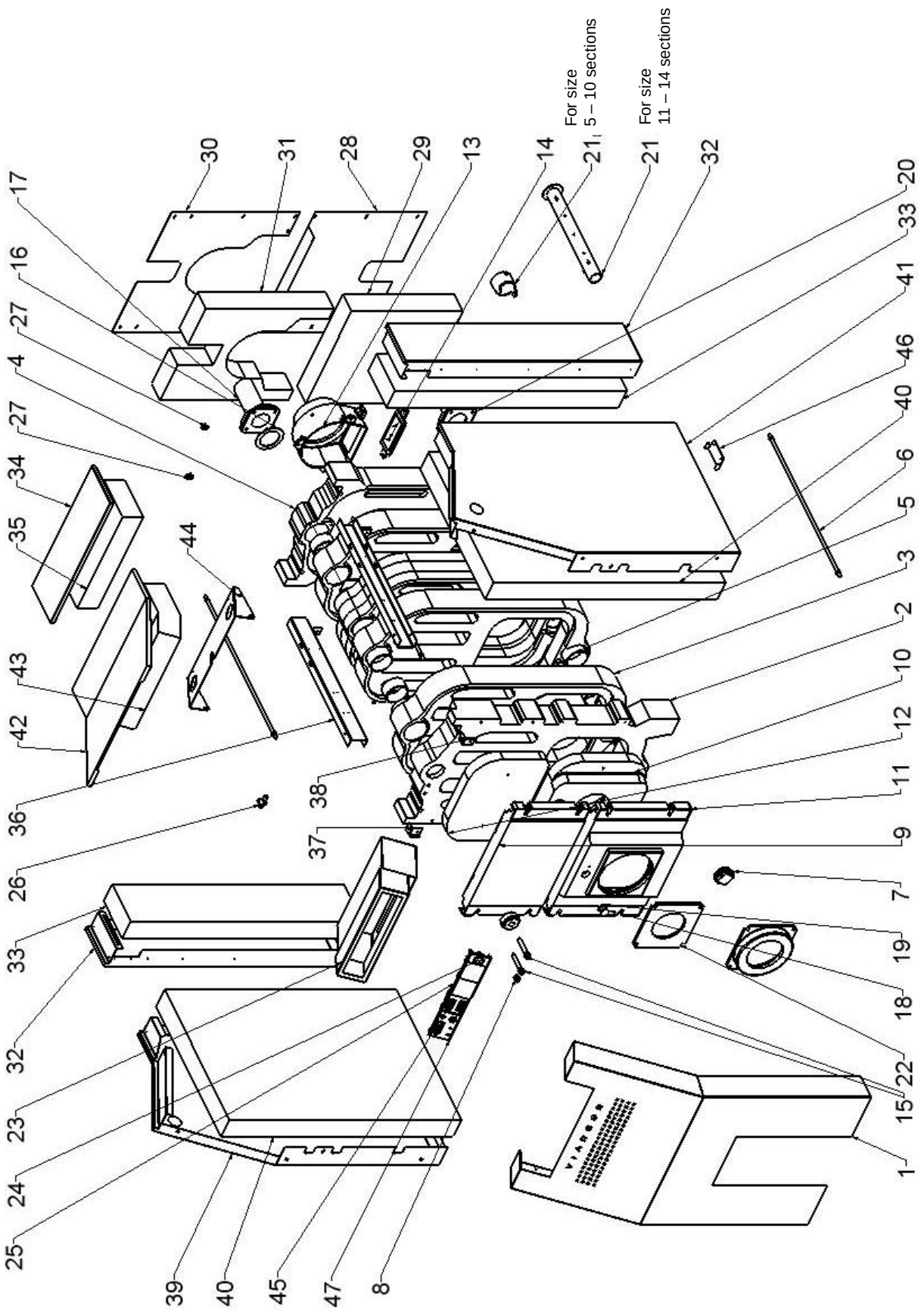
The guarantee doesn't apply to:

- **failures caused by a wrong assembly and wrong product operation**
- **product damage caused by transport or other mechanical damage**
- **failures caused by improper storage**

Every failures notification must be done immediately after having found the failures and always in writing.

When the above instructions aren't followed the guarantees provided by manufacturer will not be recognized.

The manufacturer reserves the right to changes made within the product innovation that needn't be included in this manual.


For size
5 – 10 sections
For size
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1 – jacket front section
2 – front section
3 – central section
4 – rear section
5 – boiler insertion
6 – anchor bolt
7 – plug with external thread
8 – thermomanometer clack valve
9 – sealing plate
10 – insul. adapting piece
11 – burner plate
12 – insul. adapting piece
13 – draw-off orifice
14 – explosion shutter - small cover
15 – 2x reservoir
16 – sealing
17 – heating water flange cover
18 – mica little window
19 – mica small window sealing
20 – heating water and drilled water flange
21 – restrictive insertion
22 – flange for burner 150
23 – electro-panel
24 – thermomanometer
25 – blind flange large
26 – drain cock
27 – small valve
28 – rear lower jacket part
29 – rear jacket part insulation
30 – rear upper jacket
31 – upper jacket part insulation
32 – side jacket part
33 – insul. of jacket side part
34 – upper jacket part
35 – upper jacket part insulation
36 – cons. with cable trough
37 – left section console
38 – section console
39 – jacket side part
40 – side jacket part insulation
41 – front side jacket part
42 – upper front jacket part
43 – upper jacket part insulation
44 – electro-panel console
45 – running hours counter
46 – connecting console
47 – network module

Fig. No. 6 Boiler assembly

Information for customer

Packaging edentification	Assessment reference
PE Plastic sacks, folie, corrugaled board, iron and plastic fix line	

Identification od principál materials used. Paper, Polyethylene, iron, wood

Part 1: Summary of assessment

Standard/Report	Assessment requirement	Claim	Note
1.1 Prevention by source reduction		YES	
1.2 Heavy metals and	ensure below maximum permitted levels for components (CR 13695-1:2000)	YES	
1.3 Other noxious/hazardous substances	ensure in compliance with (CR 13695-2:2002, EN 13428:2000)	YES	
2 Reuse	ensure reusability in all terms of the standard for the functional packaging unit (EN 13429:2000)	NO	
3.1 Recovery by material recycling	ensure recyclability in all term sof the standard for the functional packaging unit (EN 13430:2000)	YES	
3.2 Recovery in the form of energy	ensure that calorific gain is achievable for the functional packaging unit (EN 13431:2000)	YES	Iron - NO
3.3 Recovery by composting	ensure compost ability in all terms of the standard for the functional packaging unit (EN 13432:2000)	NO	

NOTE Conformity with EN 13427 requires affirmative responses to sections 1.1; 1.2; 1.3 and to at least one of 3.1; 3.2; 3.3. In addition, where a claim of reuse is made section 2 should also record affirmative responses.

Part 2: Statement of conformity

In the light of the assessment results recorded in part I above, this packaging is claimed to comply with the requirements of EN 13427:2000.

CALOR SRL
Str. Progresului nr. 30-40, sector 5, Bucuresti
tel: 021.411.44.44, fax: 021.411.36.14
www.calorserv.ro - **www.calor.ro**